

CLAIMS

I claim:

1. A snorkel device comprising:

a conduit adapted to extend above the water surface;

said conduit having a longitudinal axis;

said conduit having first and second ends thereof;

said conduit first end adapted to admit air into said conduit when said conduit first end is above the water surface;

said ambient air flows unrestricted into said conduit first end along a flow path that is substantially inline with the longitudinal axis of said conduit;

mouthpiece joined to said conduit second end for communicating fluid flow with said conduit;

linkage adjacent said conduit first end;

buoyant means for controlling the movement of said linkage; and

sealing means carried by said linkage, said sealing means substantially prevents the flow of ambient fluid into said conduit when at least a portion of said buoyant means is underwater; said sealing means is moved by said linkage substantially out of the ambient air flow path when said buoyant means is above the water surface.

2. The snorkel device recited in claim 1 wherein:

said linkage is a compound linkage.

3. The snorkel device recited in claim 2 wherein:

said linkage forms a four-sided polygon.

4. The snorkel device recited in claim 1 wherein:
said buoyant means is a hollow float.
5. The snorkel device recited in claim 1 wherein:
said buoyant means is carried by said linkage.
6. The snorkel device recited in claim 1 including:
control means joining said buoyant means to said linkage.
7. The snorkel device recited in claim 1 wherein:
said buoyant means is a rigid material having less density than water.
8. The snorkel device recited in claim 1 wherein:
said sealing means includes a flexible diaphragm and adjacent seat arranged to selectively provide unidirectional fluid flow from said conduit first opening to ambient when said buoyant means is at least partially underwater.
9. The snorkel device recited in claim 8 wherein:
said flexible diaphragm is carried by said linkage; and said adjacent seat is carried by said conduit first end.
10. The snorkel device recited in claim 1 including:
second valve means adjacent said conduit second end, said second valve means arranged to selectively provide unidirectional flow from said conduit to ambient.
11. The snorkel device recited in claim 1 wherein:
said buoyant means is guided by at least a portion of said conduit.

12. A snorkel device for swimmers comprising:

a conduit having a longitudinal axis, and first and second open ends thereof;

said conduit first open end adapted to admit ambient fluid into said conduit substantially in line with said longitudinal axis thereby providing a substantially straight and unrestricted flow path;

mouthpiece joined to said conduit second open end for communicating fluid flow with said conduit;

buoyant means adapted to move relative to said conduit; and

sealing means adapted to provide unidirectional flow from said conduit first opening to ambient when said buoyant means is at least partially underwater; said sealing means adapted to be not in the ambient fluid flow path when said buoyant means is out of the water.

13. The snorkel device recited in claim 12 including:

linkage adjacent said conduit first end, said linkage adapted to carry said sealing means.

14. The snorkel device recited in claim 13 wherein:

the movement of said linkage is controlled by said buoyant means.

15. A snorkel device adapted to extend above the water surface when carried by a swimmer; said snorkel device comprising:

a conduit having first and second ends thereof;

said conduit first end adapted to admit ambient fluid into said conduit;

mouthpiece joined to said conduit second end for communicating fluid flow with said conduit;

sealing means having a closed position that blocks the entry of ambient fluid into said conduit first end; said sealing means having an open position that does not substantially interfere with the flow of fluid into and out of said conduit first end;

control means; and

linkage operated by said control means; said linkage adapted to move said sealing means from the open position to the closed position when said control means is at least partially underwater, and from the closed position to the open position when said control means is out of the water.

16. The snorkel device recited in claim 15 wherein:

gravitational and buoyant forces act on said control means;

the force due to gravity acting on said control means, and water pressure against said sealing means define a combined force;

said combined force is greater than the buoyant force when said snorkel device is inverted underwater

17. The snorkel device recited in claim 15 including:

second valve means adjacent said conduit second open end, said second valve means arranged to selectively provide unidirectional flow from said conduit to ambient.

18. The snorkel device recited in claim 15 including:

protective means covering said linkage and said sealing means, said protective means does not substantially interfere with the flow of fluid into and out of said conduit first end.